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VLF
VENTLESS HOOD FOR
FULL SIZE ELECTRIC CONVECTION OVENS
INSTALLATION - OPERATION - MAINTENANCE



BLODGETT OVEN COMPANY

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Utility Connections - Standards and Codes

THE INSTALLATION INSTRUCTIONS CONTAINED HEREIN ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY. INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN DAMAGE TO THE BLODGETT EQUIPMENT AND/OR INJURY TO THE OPERATOR.

Qualified installation personnel are individuals, a firm, a corporation, or a company which either in person or through a representative are engaged in, and responsible for:

- the installation of electrical wiring from the electric meter, main control box or service outlet to the electric appliance.

Qualified installation personnel must be experienced in such work, familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction.

EPA 202 Test Method

Using EPA test method 202, emissions of grease laden vapors were measured at 0.6 mg/m³ for bone-in, skin on, quartered chickens. Results are less than the established 5 mg/m³ standard.

U.S. and Canadian installations

Installation must conform with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70-Latest Edition and/or Canadian National Electric Code C22.1 as applicable.

Australia and general export installations

Installation must conform with Local and National installation standards. Local installation codes and/or requirements may vary. If you have any questions regarding the proper installation and/or operation of your Blodgett equipment, please contact your local distributor. If you do not have a local distributor, please call the Blodgett Oven Company at 0011-802-658-6600.



WARNING!!

This device can ONLY be placed on Blodgett ELECTRIC convection ovens. DO NOT install onto gas ovens.





Installation

Delivery & Inspection

DESCRIPTION AND SPECIFICATIONS

The VLF ventless hood provides all of the cooking capabilities of the best in class Blodgett convection oven without the need for a kitchen ventilation hood. Please refer to the owner's manual of your Blodgett convection oven for detailed instruction on the operation of the oven.

DELIVERY AND LOCATION

All Blodgett equipment is shipped in containers to prevent damage. Upon delivery of your new equipment:

- Inspect the shipping container for external damage. Any evidence of damage should be noted on the delivery receipt which must be signed by the driver.
- Uncrate the equipment and check for internal damage. Carriers will accept claims for concealed damage if notified within fifteen days of delivery and the shipping container is retained for inspection.

The Blodgett Oven Company cannot assume responsibility for loss or damage suffered in transit. The carrier assumed full responsibility for delivery in good order when the shipment was accepted. We are, however, prepared to assist you if filing a claim is necessary.

Connection to Electric Convection Oven

Complete the setup procedure for the single or double stack convection oven as described in the oven owner's manual prior to installing the VLF on top of the oven.

The following instructions describe the installation of the VLF onto the convection oven:

UNCRATING AND STACKING

1. Carefully uncrate the VLF.
2. Place the VLF hood onto the convection oven's body-top. This may require two people.



Figure 1

INSTALLING THE VENT EXIT

Move the vent exit on the rear of the hood from its shipping location to the operation location as follows.

1. Loosen the screws and lift the vent exit to remove it.
2. Reinstall it over the large rectangular hole on the rear of the hood.
3. Tighten the screws.

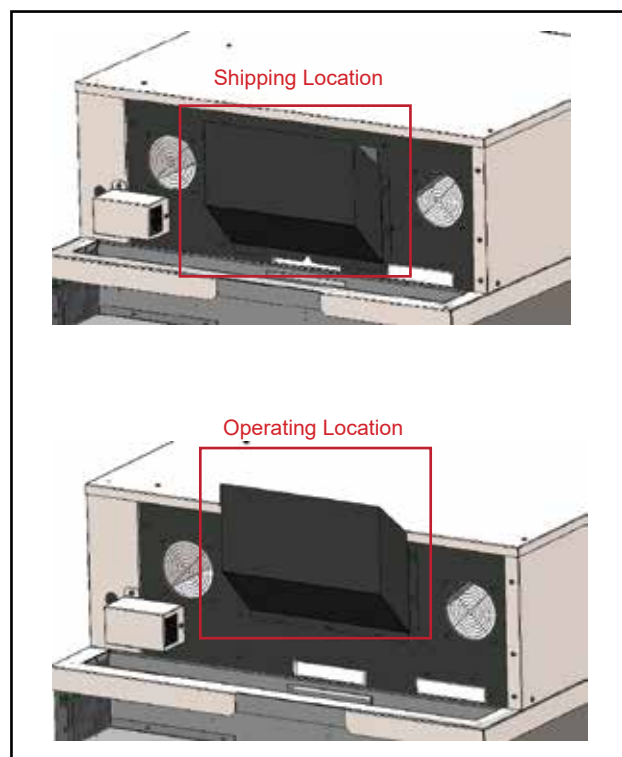


Figure 2



Installation

Connection to Electric Convection Oven

INSTALLING THE DUCTING TO THE OVEN

1. There are 4 unique ducting kits based on oven configuration.

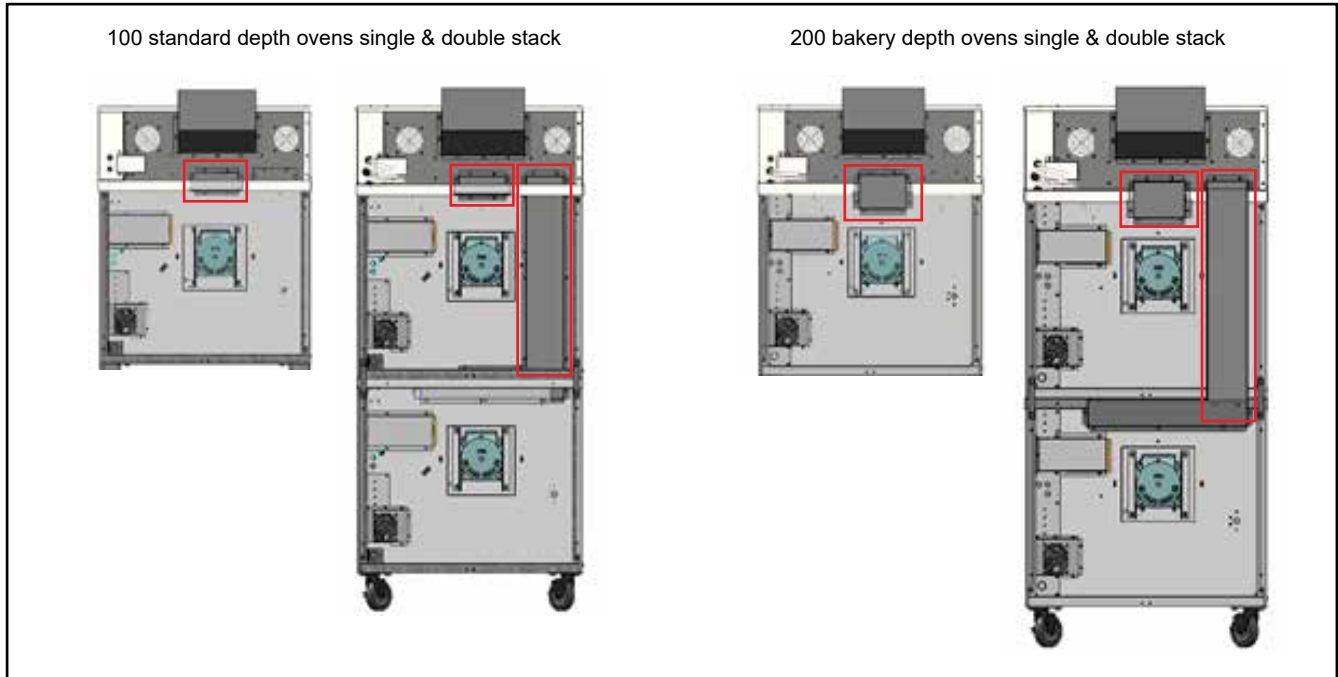


Figure 3

2. Install the ducting using the hardware provided.
 - For single stack units the opening on the right will be covered with a blocking plate.
 - For double stack units the vent riser will be connected to the opening on the right.

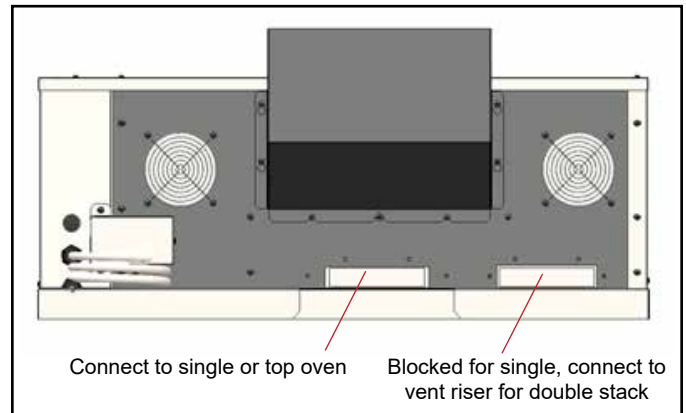


Figure 4

Connection to Electric Convection Oven

WIRING THE VLF HOOD

The VLF ventless hood is prewired. All electrical connections are made to the 4 or 6 conductor cables coming out of the ventless hood.

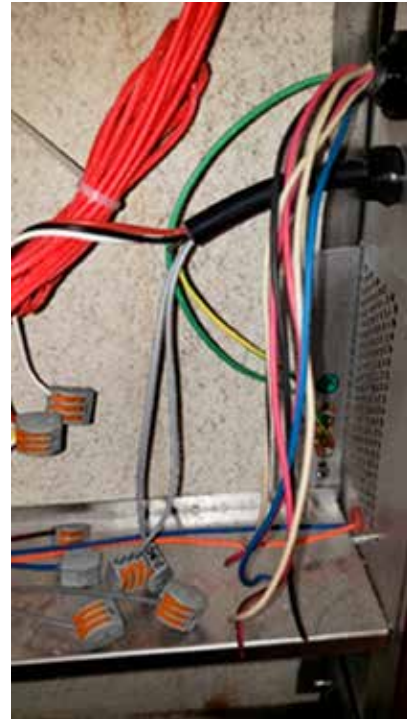
- The hood draws power from a single oven or the top oven of a double stack and uses the 6 conductor cable.
- The bottom oven of a double stack uses the 4 conductor cable.
- All electrical connections are made in the oven(s).

The VLF has one 6 conductor cable running out of the upper strain relief on the back. This will be connected to either a top oven of a double stack or a single oven.

1. Remove the nut from the strain relief and loosen the strain relief's grip on the 6 conductor cable.
2. A hole adjacent to the motor connection cable strain relief on the back of the oven has a plastic plug. Remove this plug.
3. Install the strain relief into the hole with the nut.
4. Wiring for Mark-V and Zephaire-E ovens are different. Make the connections to the oven's lever nuts according to the following table.

NOTE: The green wire from the 6 conductor cable goes into the oven's copper ground lug.

SINGLE OR TOP OVENS		
VLF Hood	MARK V OVENS	ZEPHAIRE E OVENS
Blue	Blue-40	Blue-40
Black	Brown-40	Brown-40
Green	Ground Lug	Ground Lug
White	Gray (to Motor Cable)	Gray (to Motor Cable)
White w/ Black Stripe	Gray (to Motor Cable)	Gray (to Motor Cable)
Red	Gray-1	Yellow-1
Red w/ Black Stripe	Gray-2	Yellow-2



Before Making Wiring Connections



After Making Wiring Connections

Figure 5



Installation

Connection to Electric Convection Oven

5. If the oven is a double stack, connect the 4 conductor cable coming out of the back of the VLF's bottom strain relief to the bottom oven of the double stack oven following the bottom table below.

BOTTOM OVENS		
VLF Hood	MARK V OVENS	ZEPHAIRE E OVENS
White	Gray (to Motor)	Gray (to Motor)
White w/ Black Stripe	Gray (to Motor)	Gray (to Motor)
Red	Gray-1	Yellow-1
Red w/ Black Stripe	Gray-2	Yellow-2

6. After the electrical connections are made tighten the grip on the newly installed strain reliefs on the back of the oven.

7. Route and secure the cable(s) with the supplied jiffy clip(s) to the back of the oven(s) as shown.



Figure 6



Ventless Hood Control Panel

CONTROL DESCRIPTION

1. Hood is on and operating properly.
2. Filter is becoming clogged. **Replace the filter as soon as possible.** The oven will continue to run for a short period before becoming completely clogged. It is critical to replace the filter shortly after the “Replace Filter” light comes on; otherwise the filter will become completely clogged. Once the filter is completely clogged the oven will no longer heat until a new filter is installed. To prevent interruptions to operation of the oven keep a replacement filter on hand and change it once the “Replace Filter” light comes on.
3. Unit is experiencing an air flow fault. Either the filter is completely clogged or the suction blower is not operating properly. First replace your filter. If air flow fault continues contact your service agent to address the suction blower. **The oven will not heat until the red light is off.**
4. CIRCUIT BREAKER - Must be in the ON position for hood to run.

OPERATION

1. Ensure circuit breaker is in the ON position. The hood will run with the oven’s convection fan(s).



WARNING!!

If the red indicator light on the hood is illuminated the oven/ovens will not heat. All functions of the oven will continue to work except for heat. The hood filter must be replaced to turn off the red indicator light.

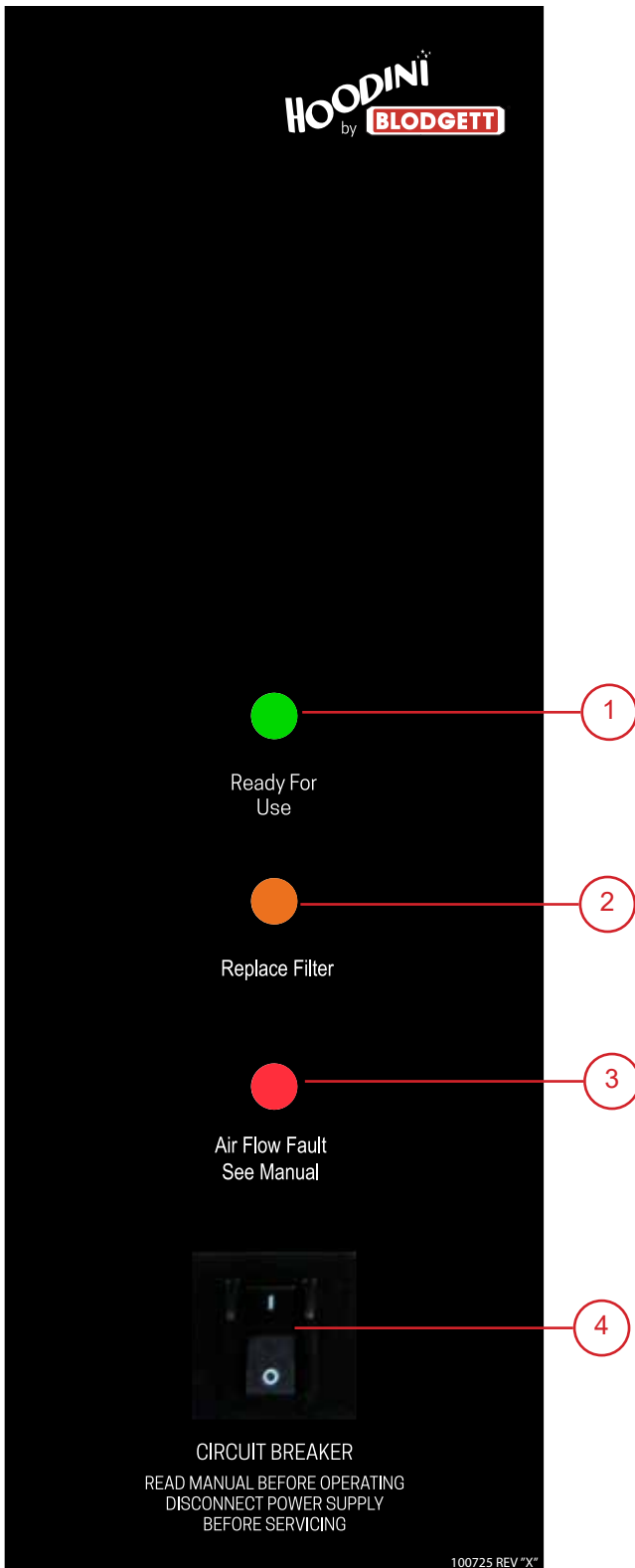


Figure 7



Operation

Sequence of Operation

1. The ventless unit receives power from the field wiring block of a single, or top of a double stack, ventless ready oven. This received power runs to the front panel circuit breaker of the ventless unit and must be in the ON position in order for the ventless unit to operate.
2. The ventless unit has an interlock switch that engages when the ventless unit's filter is properly installed. The filter interlock switch also must be engaged in order for the ventless unit to operate.
3. Provided 1 and 2 above are satisfied, turning on either the top or bottom ventless ready oven of a double stack or the single ventless ready oven will start the oven's convection blower motor, closing the motor's proof of rotation switch which will turn on the ventless hood's blower motor.
4. When VLF is running the blower creates a differential pressure between the plenums above and below the ventless unit's filter. The upper and lower pressure taps are connected to pressure switches. Initially a 0.10"W.C. pressure switch connected only to the top plenum verifies that the blower is operating.
5. Two other pressure switches monitor the life of the filter. When the differential pressure is below 0.15"W.C. the filter is new and the green "Ready For Use" indicator light will be on.
6. As the ventless unit's filter becomes obstructed from usage, the differential pressure across the filter will rise. When this differential pressure reaches 0.25"W.C., the orange indicator labeled "Order New Filter" will illuminate on the front panel of the ventless unit.
7. As the ventless unit's filter becomes further obstructed from usage the differential pressure will continue to rise. When this differential pressure reaches 0.40"W.C. the red indicator light labeled "Change Filter To Use Oven" will illuminate on the front panel of the ventless unit. Once the red indicator is illuminated the oven's call for heat will disengage. The ovens will still operate but will not heat.



Filter Replacement

The filter on the VLF needs to be replaced as it becomes clogged with grease and particulates given off by the cooking process. **The lifespan of a filter will vary depending on the amount and types of foods cooked in an oven.**

The indicator lights will tell you when it is time to replace your filter.

- When the ORANGE indicator lights it is time to order a new filter. Both the orange and green indicator remain lit and the oven will continue to function. Replace the filter as soon as possible.
- If the filter is not changed, eventually the RED indicator light will illuminate. This indicates that the filter is too clogged to effectively remove particulates and grease laden vapor from the cooking exhaust. **If the red indicator light is illuminated the oven/ovens will not heat.**

HOW TO REPLACE THE FILTER

1. Turn off the oven/ovens and the breaker on the front of the VLF.
2. Remove the front panel of the hood using the handles. Lift straight up until the retaining hooks are free. Next, pull the panel away from the oven.



Figure 8

3. The filter will spring out for easy removal.

NOTE: If the filter is severely clogged with excessive grease buildup, it may not spring out. In this case, a tool may be required to remove it.

4. Discard the used filter. **DO NOT try to clean and reuse a filter.** It will not function properly.
5. Install the new filter.
 - a. Make sure the arrows on the edge of the filter are pointing up.
 - b. Push the filter all the way in. It is spring loaded and will stick out approximately 1" from the face of the hood.



Figure 9

6. Reinstall the front panel by aligning the hooks on the back of the panel with the notches in the hood. Pull down to secure.

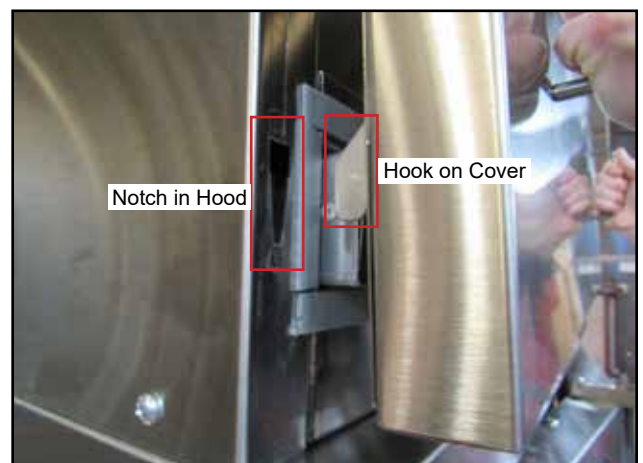


Figure 10

7. Turn on the oven(s) and the breaker on the front of the VLF. The green indicator light should illuminate indicating that the hood is back up and running.



Maintenance

Cleaning

It is critical to keep the oven cavities clean when operating with a ventless hood. The ventless hood is intended to capture grease laden vapor, not smoke. An oven cavity that is not properly cleaned, free of debris, and charred food scraps, will produce smoke. Ensure that your oven is cleaned regularly.

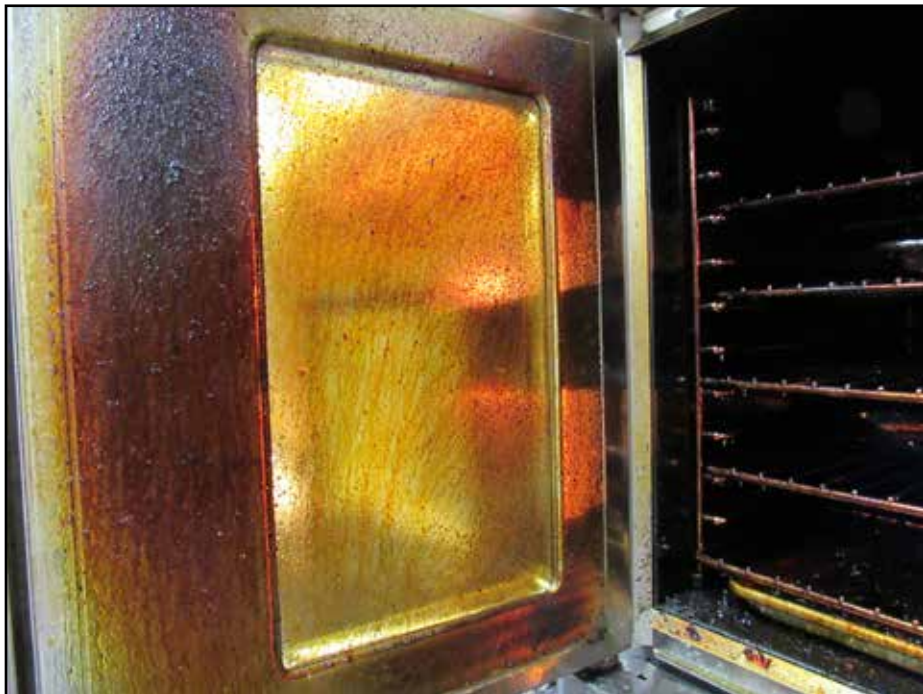


Figure 11

Insufficiently cleaned oven will produce smoke